



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

TRANSPORTATION
LIBRARY

TC
625
.S2
W33

A 757,195

UNIVERSITY OF
*University of
Michigan
Libraries*

1944
SERIALS SECTION



1.813

POSTAL SECRETARY-
OF THE GREAT LAKES COMMERCE
DULUTH, MINN.

OFFICIAL.

The Sault Ste. Marie Canal

AND HAY LAKE CHANNEL.

NECESSITY OF THEIR SPEEDY IMPROVEMENT.

PROCEEDINGS OF THE

Waterways Convention

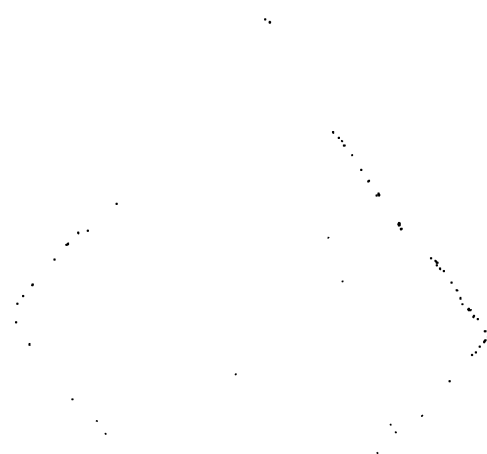
HELD AT

SAULT STE. MARIE, MICHIGAN,

JULY 20th, 1887.

Published by order of the Convention under the direction of the
Permanent Secretary.

DULUTH:
DAILY NEWS PRINT.
1887.







THE
Sault Ste. Marie Canal
AND HAY LAKE CHANNEL.

Official Report of the Proceedings

OF THE

Waterways Convention

HELD AT

SAULT STE. MARIE, MICHIGAN,

JULY 20th, 1887.

Published by order of the Convention under the direction of the
Permanent Secretary.

DULUTH:
DAILY NEWS PRINT.
1887.

Transportation
Library

TC

625

.52

W33

OFFICERS OF THE CONVENTION.

HON. T. W. PALMER, President,	-	-	-	Detroit
WILLIAM F. PHELPS, Secretary,	-	-	-	Duluth
BRUCE GOODFELLOW,	{	Assistant Secretaries,		
F. J. MARSH,		Duluth		

EXECUTIVE COMMITTEE.

GEORGE H. ELY, Chairman,	-	-	-	Cleveland
WM. H. LYON,	-	-	-	New York
WILLIAM F. PHELPS, Secretary,	-	-	-	Duluth
A. FOSTER HIGGINS,	-	-	-	New York
P. H. KELLY,	-	-	-	St. Paul
C. M. LORING,	-	-	-	Minneapolis
JAY HUBBELL,	-	-	-	Houghton
CLINTON B. FISK,	-	-	-	New York
ABNER A. WRIGHT,	-	-	-	Chicago
E. V. SMALLEY,	-	-	-	St. Paul
H. W. SEYMOUR,	-	-	-	Sault Ste. Marie
JAMES R. SMITH,	-	-	-	Buffalo
J. T. WHITING,	-	-	-	Detroit

EXPLANATORY.

In order to embody in this publication of the Proceedings of the Waterways Convention, recently held at Sault Ste. Marie, as complete a record as possible of the events that led up to it, and of the facts that justified and demanded it, it has been deemed best to reproduce the action of the Duluth Chamber of Commerce, taken at a meeting of the Directors held February 21st, 1887, and the call issued June 4th, under which the Convention assembled.

The vast importance to the commerce of the country of the work in progress at the St. Mary's river, and the certainty that still greater improvements will be needed in the near future, render it advisable to open up to the people every available source of information relating thereto. In this connection particular attention is invited to the able memorial adopted by the Convention, as prepared by Mr. Ely, of Cleveland, to the notes kindly furnished by Mr. W. B. Dean, of St. Paul, and Mr. G. Waldo Smith, of New York, and to the map and illustrations embodied in this publication.

WM. F. PHELPS,
Secretary of the Convention.

CHAMBER OF COMMERCE, }
Duluth, September 20th, 1887. }

PRELIMINARY CALL.

CHAMBER OF COMMERCE,

SECRETARY'S OFFICE,

DULUTH, Minn., March 1, 1887. }

To the Chambers of Commerce, Boards of Trade and other Commercial Bodies interested in the unobstructed navigation of our great Northern Lakes :

GENTLEMEN :

At a meeting of the Duluth Chamber of Commerce, held on Monday, February 21st, 1887, the annexed resolutions were unanimously adopted. Your prompt and careful attention is respectfully solicited to them :

WHEREAS, The locks at the Saint Mary's Falls Canal are now taxed to within one-sixth of their entire capacity, the registered tonnage passing through the same in 1886 being 4,219,377, and the actual freight amounting to 4,527,759 tons, the increase in a single year having been equal to thirty-nine per cent.; and

WHEREAS, The estimated cost of enlarging and improving the locks to meet the present demands of commerce is \$4,738,465, and the appropriation therefor during the current year is but \$100,000, at which rate the said improvements cannot be completed in less than fifty years, while any serious accident to the existing locks would paralyze the commerce of the entire Lake Superior region for an indefinite period, therefore be it

RESOLVED, That in the opinion of this Chamber, steps should at once be taken by all the commercial bodies between Duluth and the seaboard to impress upon the Congress of the United States the supreme importance of making such appropriations as will insure the completion of the proposed improvements within the shortest possible period consistent with the perfection of the work to be performed ;

RESOLVED, That the Secretary of this Chamber is hereby authorized and directed to open correspondence with all similar bodies interested in the commerce passing through the Saint Mary's canal and locks, with the view of securing their co-operation in the calling of a Convention at the Falls of the Saint Mary during the coming summer, for the purpose of gaining such information from an actual inspection of the condition of things at that point, as will enable the Convention to speak from actual knowledge of the pressing needs of the situation, and with emphasis and effect to the national authorities at the next session of Congress.

Your hearty co-operation is respectfully requested in the movement to secure a Convention, if the same meets with your approval.

By order of the Board of Directors.

WILLIAM F. PHELPS, Secretary.

CALL FOR THE SAULT STE. MARIE CONVENTION.

To the Chambers of Commerce, Boards of Trade, Transportation Companies and other Commercial Bodies interested in the unobstructed navigation of our great Northern Lakes :

GENTLEMEN :

WHEREAS : In response to a circular of the Duluth Chamber of Commerce addressed to you, dated March 1st, 1887, soliciting an expression of opinion as to the desirability of a Convention at Sault Ste. Marie, to be held on the 20th of July next, to consider the situation of affairs relating to the improvement of the canal and locks at that place, a large number of these organizations have signified their approval of said Convention, and their determination to co-operate therein by sending delegates thereto, and no replies unfavorable to the same have up to this time been received;

Now, therefore, the undersigned, representatives of the organizations named below, and acting in behalf of the commercial bodies concurring in the movement, hereby issue this formal call for said Convention at Sault Ste. Marie on the 20th of July next, as aforesaid.

Each Chamber of Commerce, Board of Trade, or other commercial organization receiving this call, is earnestly requested to send at least five delegates, reporting the names thereof, so soon as appointed, to the Secretary of the Chamber of Commerce of Duluth, to the end that suitable arrangements may be made for their accommodation.

Delegates can take steamers at the nearest lake ports at such dates as will enable them to reach Sault Ste. Marie in time for the Convention.

We respectfully refer you to the pamphlet herewith forwarded for a comprehensive statement of the condition of affairs at the canal and commend the same to your careful attention.

O. H. SIMONDS, President of the Chamber of Commerce, Duluth.

RUSSELL BLAKELY, President of the Chamber of Commerce, St. Paul.

JOHN S. PILLSBURY, Director of the Board of Trade, Minneapolis.

S. D. CALDWELL, President of the Lake Carriers' Association, Buffalo.

WM. EDWARDS, President of the Board of Trade, Cleveland.

N. W. FARLEY, Vice President of the Merchants' Association, Boston.

FRANK J. FIRTH, President Erie & N. W. Transportation Company, Philadelphia.

J. T. WHITING, General Agent of the Lake Superior Transit Company, Detroit.

JAMES R. SMITH, President of the Merchants' Exchange, Buffalo.

WM. B. DEAN, Chairman Transportation Committee Jobbers' Union, St. Paul.

OWEN FARGUSSON, President of the Board of Trade, Duluth.

JAMES W. MILLAN, General Manager of the Detroit Transportation Company, Detroit.

WM. HANNA, President of the Vessel Owners' Association, Cleveland.

A. M. CLERHUEW, President of the Jobbers' Association, Minneapolis.

H. B. GOODWIN, President of the Chamber of Commerce, Boston.

JULY 4th, 1887.

PROCEEDINGS OF THE CONVENTION.

In conformity with the foregoing call, the Convention assembled at Sault Ste. Marie July 29th, in a large tent provided by the local committee of arrangements, and was called to order at 10 o'clock A. M., by the Hon. Amos Townsend, of Cleveland, Ohio, and on his motion Wm. F. Phelps, Secretary of the Duluth Chamber of Commerce, was elected temporary Chairman.

On being introduced, Mr. Phelps briefly addressed the Convention substantially as follows :

GENTLEMEN OF THE CONVENTION :

I should be wholly wanting in sensibility did I fail to assure you of my high appreciation of the honor you have conferred upon me by electing me to the temporary Chairmanship of this Convention, composed as it is of the representatives of the leading commercial bodies of the Northwest and of the East, having a deep stake in the free and unobstructed navigation of the Great Lakes. After the burden of more than four months of labor in arranging the details of this Convention, it was my desire that its delegates, on assembling here, should take its business into their own hands, relieving me of any further care or responsibility in the conduct of its affairs. I accept, however, with gratitude this added duty, and shall endeavor to prove my loyalty to the great interests we are here to promote by doing everything that my limited abilities will permit, thoroughly to accomplish the work before us.

This Convention had its origin in action taken by the Duluth Chamber of Commerce in February last, upon information obtained as to the critical condition of affairs at this canal. On the 21st of that month resolutions

were adopted giving a general statement of the situation here, expressing the opinion that steps should be at once taken by all the commercial bodies interested in the navigation of the Great Lakes, to impress upon the Congress of the United States the supreme importance of making such appropriations as will insure the prompt completion of the work here, and directing the Secretary to open correspondence with the various organizations interested, for an expression of opinion as to the desirability of such a Convention as that which is here to-day.

On the 1st of March a preliminary circular was issued in accordance with this action, to about one hundred Chambers of Commerce, Boards of Trade, Transportation Companies and others, and the responses thereto were so numerous and so uniformly favorable as to leave no doubt of the success of the proposed Convention. Accordingly, on June 4th, the formal call, signed by the representatives of fifteen of the leading organizations of the East and West, was issued, and the result is before us this morning.

Gentlemen, you have assembled here at the foot of a vast inland sea, having a coast line of not less than a thousand miles. It is itself the ultimate terminus of, all things considered, the most remarkable system of water ways on the surface of the globe, stretching, as that system does, from the Eastern seaboard and along the parallels on that great pathway of commerce which has borne the burdens of civilization during all the centuries of the past, to the heart of the North American Continent on the West. This wonderful sea sits in the lap of a variety and extent of natural resources that are really immeasurable by human intelligence. The miner with his pick, the sturdy woodsman with his axe, and the toiling husbandman with his ploughshare, have barely begun to scratch the surface of the mighty stores of wealth that are tributary to the commerce of this lake, and yet we find that commerce menaced with a blockade at this point, which threatens the most serious embarrassment to the business interests of the whole Northern half of the Republic. Nature has here imposed a barrier and offered a challenge to the intelligence, enterprise and ingenuity of man. That challenge has been met, and an artificial channel, 5,400 feet long and seventy feet wide, terminating in a lock 515 feet in length, eighty feet in width, and seventeen feet in depth, a masterly work of engineering skill, has been constructed to overcome the inequalities of altitude, and thus allow our ships to pass without obstruction from level to level of the Great Chain of Lakes.

The rapid growth of this commerce has been a constant source of surprise to the country. The number of vessels passing through the lock in

1885 was 5,380, with an actual freight tonnage of 3,256,628 tons, while in 1886 the figures increased to 7,424 vessels, with a tonnage of 4,527,759 tons, of the aggregate value of nearly \$70,000,000, an increase in one year of thirty-nine per cent. The increase of the current year from all indications promises to be still greater, and may reach an aggregate equal to fifty per cent. The maximum capacity of the present lock, vessels arriving and departing in groups of four each way, is ninety-six vessels for each twenty-four hours. In the month of July, 1886, sixty-seven vessels were passed through the lock, the largest number on record to that date. But during the month of June, of the present year, eighty-four vessels were passed in a single day. It will thus be seen that the time is near at hand, when even under the most favorable conditions, a serious blockade of our commerce, if the present rapid growth continues, is inevitable. The cost of the projected improvements, including the construction of a new and larger lock, and the deepening of the canal, will be from \$5,000,000 to \$7,000,000, and at the rate of recent appropriations, fifty years will pass away before these works can be completed. In the meantime, what is to become of the commercial interests of the people along this great highway to the sea? And what if an accident to the gates of the present lock should deprive us of its use even for a part of a season? The losses thus accruing on the basis of last year's business would mount up, directly and indirectly, to more than \$5,000,000, a sum equal to the total cost of the new lock.

From these considerations it would seem that the note of alarm has been sounded none too soon. Through this representative gathering an appeal is to be made to the people and to the judgment of Congress. These waterways and these public works are the property of the people, and their expeditious and substantial improvement is a question that vitally concerns the interests of the people. The grand purpose of this Convention is to consider the simple question, what shall be done to expedite the work on this canal to the end that it may be completed in the shortest possible period of time, consistent with the safety and permanency of the structure? This question, judging from the character of the men I see before me, the Convention will find a way to answer in a manner that will command the respect of the people, challenge the attention of Congress, and secure the appropriations needed to carry the work to a speedy completion.

Gentlemen, again thanking you for this mark of your confidence, the Chair is ready to execute your further commands.

On motion, Mr. Bruce Goodfellow, of Detroit, was elected temporary Secretary of the Convention.

It was moved and seconded that a Committee each, on Credentials, on Permanent Organization and on Resolutions be appointed. Adopted.

Capt. Russell Blakeley, of St. Paul, moved that each delegation select from its own number one member for each of the Committees thus provided for. Carried.

On motion, the Chair was requested to invite all Governors and ex-Governors, all Senators and ex-Senators, Congressmen and ex-Congressmen present at the Convention, to seats on the platform. The Chairman accordingly invited ex-Governor Begole, of Michigan, Senator Palmer, ex-Senator Stearns and Congressmen Farquhar, Moffat, Nelson, Lind, Roemis and others to occupy seats near the Chair.

The Chair suggested that the several delegations prepare a list in writing of such of their number as may be designated to act upon the several Committees, and hand the same to the Secretary.

The subjoined resolution was offered by Mr. Dean, of St. Paul, and was unanimously adopted :

RESOLVED, That all resolutions be referred, without debate, to the Committee on Resolutions ; that only such subjects shall be discussed as may be reported by that Committee, and that members be confined to ten minutes for each question.

The following resolutions were offered by Mr. Townsend, of Cleveland, Ohio :

WHEREAS, The national importance and magnitude of the interests involved in the problem of improving the St. Mary's River, Michigan, the pressing necessity for largely increased facilities to meet the increasing demands of commerce, taken in connection with the large amount of money required to complete the improvement, in accordance with the plans recommended by Gen. O. M. Poe, of the U. S. A., who has charge of the work, make it so exceptional in character that it should be taken out of the usual appropriations made by Congress for improvements of rivers and harbors, and provided for by the passage of a special law by Congress, securing the improvement of this river, and appropriating a sufficient amount of money to pay for its cost, to be held subject to drafts of the Secretary of War, for that purpose, therefore,

RESOLVED, That this Convention, representing as it does the Boards of Trade, Transportation Companies, mining interests and business men in every city and town on the entire chain of lakes, after careful consideration, heartily approve the plans and recommendations of Gen. O. M. Poe for the improvement of the St. Mary's River, and the construction

of locks as set forth in his report to the Secretary of War, and printed by Congress in the Executive Document No. 72, January 7th, 1887, which comprises a detailed plan for this important improvement, with estimated cost for its construction, amounting in round numbers to \$5,000,000.

BE IT FURTHER RESOLVED, That the representatives in Congress, from the State of Michigan, be respectfully requested to invite the co-operation of the representatives from all the States interested in the commerce of the Great Lakes, in urging the passage by Congress of a special law authorizing the improvement of the St. Mary's River, Michigan, in accordance with the plans furnished by Gen. Poe, and appropriating the estimated amount of money to pay for the work, this appropriation to be subject to the order of the Secretary of War, thereby avoiding delay incident to annual appropriations.

This communication was received and referred to the Committee on Resolutions, under the rule previously adopted.

The following Committees were announced by the Chair :

Committee on Credentials—B. L. Pennington, Cleveland ; J. S. Far-
rand, Detroit ; James Talcott, New York ; S. Fuller, St. Cloud ; F. M.
Wilson, Red Wing ; E. B. Banks, Superior ; Geo. R. Finch, St. Paul ; J.
B. Canterbury, La Crosse ; A. Kelly, Minneapolis ; G. Waldo Smith, New
York ; Wm. J. Ryan, Houghton ; John A. Willard, Mankato ; C. G.
Spalding, Minnesota ; M. R. Baldwin, Duluth ; O. M. Fowler, Sault Ste.
Marie ; R. E. Watson, Sault Ste. Marie ; Wm. Orr, Marquette.

Committee on Permanent Organization—C. B. Lockwood, Cleveland ;
J. W. Westcott, Detroit ; W. E. Lawrence, Cleveland ; Clinton B. Fisk,
New York ; W. M. Powell, St. Cloud ; F. M. Wilson, Red Wing ; C. H.
Sunderland, West Superior ; C. L. Catlin, Superior City ; Capt. R. Blakeley,
St. Paul ; S. O. Cargill, La Crosse ; C. M. Loring, Minneapolis ; G. Waldo
Smith, New York ; T. B. Dunston, Houghton ; Hon. John M. Farquhar,
Buffalo ; John F. Meagher, Mankato ; E. R. Smith, St. Paul ; Geo. G.
Barnum, Duluth ; Thos. Ryan, Sault Ste. Marie ; T. W. Burdick, Sault
Ste. Marie ; Wm. Orr, Marquette.

Committee on Resolutions—Geo. H. Ely, Cleveland ; Hon. J. Logan
Chipman, Detroit ; Geo. H. Converse, Ohio ; P. R. Chandler, Chicago ; A.
Foster Higgins, New York ; F. E. Searle, St. Cloud ; O. M. Hall, Red
Wing ; A. W. Stow, West Superior ; James Bardon, Superior ; Hon. Perry
Hanna, Traverse City ; Hon. H. M. Rice, St. Paul ; Wm. Thurstone, Buf-
falo ; H. C. Higgins, Ashland ; Jos. Clark, La Crosse ; J. Lowell, Fargo ;
Hon. Isaac Atwater, Minneapolis ; G. W. Smith, New York ; Jay Hubbell,

Houghton ; John C. Wise, Mankato ; E. H. Loyhed, Minnesota ; Albert N. Seip, Duluth ; Wm. Orr, Marquette ; Hon. H. W. Seymour, Sault Ste. Marie ; Geo. Cady, Sault Ste. Marie.

On motion, the Convention took a recess of half an hour to allow the Committees time to prepare their respective reports.

11:30 A. M. The Convention was again called to order by the temporary Chairman, who announced as the first business in order the report of the Committee on Credentials, which was presented by Mr. Farrand, of Detroit.

REPORT OF THE COMMITTEE ON CREDENTIALS.

Chairman, J. S. Farrand.

Secretary, Otto Fowler.

Chamber of Commerce, New York—Wm. H. Lyon, A. Foster Higgins, Clinton B. Fisk, A. S. Barnes and James Talcott.

St. Paul Jobbers' Union, St. Paul, Minn.—W. B. Dean, Chairman ; P. H. Kelly, G. R. Finch, C. M. Griggs, C. W. Hackett, D. R. Noyes, D. H. Moon, C. Seabury, Wm. Lindeke, S. W. Foote, C. H. Worthen, F. Keogh, C. H. Kellogg, F. R. Abbott and J. B. Larkin.

St. Paul Chamber of Commerce—Hon. Alex. Ramsey, Hon. H. M. Rice, Russell Blakeley, D. D. Merrill, C. H. Lienau, P. Berkey, G. W. Watson, A. B. Wilgus and E. D. Neill.

Board of Trade, Minneapolis—Hon. Isaac Atwater, Hon. John S. Pillsbury, Hon. O. C. Merriman, Capt. J. C. Whitney and Capt. J. C. Reno.

Minneapolis Chamber of Commerce—C. M. Loring, President, L. R. Brooks, W. H. Eustis and A. Kelly.

Minneapolis Jobbers' Union—Hon. J. C. O. Scovell, C. S. Brackett, G. M. Naylor and F. P. Semple.

Business Mens' Association, of Minnesota—E. R. Smith, Hon. C. S. Spalding, E. H. Loyhed and L. Trendle.

Board of Trade, City of Chicago—Edmund Norton, James H. Milne, Chas. J. Singer, W. E. Lawrence and P. R. Chandler.

Cleveland Vessel Owners' Association—Capt. Thos. Wilson and B. L. Pennington.

West Superior Chamber of Commerce—Dr. O. N. Murdock, Alex. McEachern, Alex. W. Stow, C. H. Sunderland and H. E. Ticknor.

Superior Chamber of Commerce—James Bardou, C. L. Catlin and E. B. Banks.

Cleveland Board of Trade—Amos Townsend, Chairman, C. B. Lockwood, W. B. Clarke, C. S. Overman and Geo. W. Lewis.

Duluth Board of Trade—James McCahill, Dr. S. S. Walbank, G. G. Barnum, F. A. Gooding and Capt. Alex. McDougall.

Duluth Produce Exchange—M. R. Baldwin, Thos. Dowse, George Strayer, J. R. Myers and F. J. Marsh.

Duluth Chamber of Commerce—Wm. F. Phelps, Wm. H. Burke, A. N. Seip, Chas. E. Shannon and O. P. Stearns.

Mankato Board of Trade—John A. Willard, John F. Meagher, John C. Wise, H. M. Hamilton, Lester Patterson.

Austin Board of Trade, Austin, Minn.—C. H. Davidson.

Marquette Business Mens' Association—Wm. Orr.

Houghton Business Mens' Association—Hon. J. A. Hubbell, T. B. Dunston, R. R. Goodell, Wm. Linton, Graham Pope and W. J. Ryan.

Citizens' Improvement Association, Sault Ste. Marie—Hon. Henry W. Seymour, R. M. Adams, Thos. Ryan, Chas. R. Stuart and Otto Fowler.

St. Cloud Chamber of Commerce—F. E. Searle, Wm. Powell, S. Fuller, D. Freeman and C. F. McDonald.

New Ulm Board of Trade—Hon. John Lind.

Ashtabula, Ohio—F. A. Williams.

Traverse City Business Mens' Association—Hon. P. Hanna, T. T. Bates and Hon. S. C. Moffatt.

Hillsdale, Michigan—Hon. O. A. James and H. S. Walworth.

Bryan, Ohio—P. Smith.

Fargo Board of Trade—J. Lowell.

La Crosse Board of Trade—Jos. Clarke, J. B. Canterbury and S. D. Cargill.

Ashland Business Mens' Association—H. C. Higgins.

Detroit Board of Trade—Phil Parsons, John H. Wendell, Byron Whittaker, Preston Brady, James T. Shaw and E. Ward.

Citizens' Association, Detroit—J. S. Farrand, J. Logan Chipman, P. Beneteau, Bruce Goodfellow.

Board of Trade, Detroit—J. W. Westcott and Eber Ward.

Board of Trade, Winona—F. A. Johnston, S. R. Van Zant, John Ludwig, H. M. Kinney, George W. Gregory, W. H. Garlock and C. L. Bonner.

Buffalo Merchants' Exchange—Wm. Thurstone, Wm. H. Chapin, Peter C. Doyle, H. J. Hurd, Andrew Langdon and Jas. A. Whitney.

Philadelphia Board of Trade—John C. Klander and Chas. Dunwoody.

Moved that the Committee rise, and through the Chairman, report.
J. S. FARRAND, Chairman.

OTTO FOWLER, Secretary.

The report of the Committee on Credentials was adopted without dissent.

LETTERS.

While waiting for the report of the Committee on Permanent Organization, the temporary Chairman stated that a large number of letters had been received from leading public men, expressing hearty sympathy with the objects of the Convention, and regret at their inability to be present. The reading of these letters being called for, the following were submitted :

From GOV. GRAY, OF INDIANA :

INDIANAPOLIS, July 7th, 1887.

DEAR SIR :—I have the honor to acknowledge the receipt of yours, inviting me to attend the Convention of the various commercial organizations called to meet at Sault Ste. Marie, on the 20th of this month.

Official and other engagements prevent me from accepting your kind invitation, but I sincerely hope that the meeting may result in influencing and arousing the Government to an appreciation of the great interests involved, and cause the necessary improvements to be made at the earliest date possible, which the growing commerce of the Great Lakes demand.

Very Respectfully Yours,

G. P. GRAY.

From SENATOR WM. M. EVARTS, OF NEW YORK :

WINDSOR, Vt., July 8th, 1887.

MY DEAR SIR :—I thank you for the attention shown me by the kind invitation to attend the Convention to be held at Sault Ste. Marie on the 20th inst.

I regret very much that my engagements will not allow me the pleasure of attending this important Convention, but I beg to assure the Committee of Arrangements that I heartily concur in every measure well calculated to develop and protect the navigation of the Great Lakes.

I am, my dear sir,

Yours Very Truly,

WM. M. EVARTS.

From SENATOR SHERMAN, OF OHIO :

MANSFIELD, Ohio, July 9th, 1887.

MY DEAR SIR :—Your letter of the 28th ult., inviting me to meet a Convention of various commercial organizations, interested in the unobstructed navigation of the Great Lakes, at Sault Ste. Marie, on the 20th inst., is received.

I cordially approve of the enterprise proposed, but my engagements will not permit me to attend.

Very Truly Yours,

JOHN SHERMAN.

From SENATOR CULLOM, OF ILLINOIS :

SPRINGFIELD, Ill., July 6th, 1887.

DEAR SIR :—Your favor of 28th ult., inviting me to attend a Convention of commercial organizations interested in the unobstructed navigation of the Great Lakes, to be held at Sault Ste. Marie, on the 20th inst., has been received. I thank you sincerely for the invitation. I am sorry that my engagements are such that I cannot accept it. I am a great believer in liberal action by the National Government in the improvement of the water ways, whether on the lakes, or rivers, or canals, in the interest of cheap transportation, which is the great subject before the people.

Regretting that I cannot be with you, and trusting your Convention will be a success and do good, I am,

Very Truly Yours,

S. M. CULLOM.

From SENATOR HOAR, OF MASSACHUSETTS :

WORCESTER, Mass., July 6th, 1887.

MY DEAR SIR :—I regret that I am prevented, by peremptory professional engagements, from accepting your courteous invitation to attend the Convention at Sault Ste. Marie, to be held July 20th. I am,

Yours Very Respectfully,

GEO. F. HOAR.

From SENATOR SABIN, OF MINNESOTA :

STILLWATER, Minn., July 7th, 1887.

DEAR SIR :—Your favor of the 27th ult. has remained unanswered, hoping I might advise acceptance of your invitation to be present and participate in the deliberations of the Convention to be held on the 20th inst., at Sault Ste. Marie. I find, however, that important business engagements in the East will so occupy my time that I cannot return in season to meet with your Convention.

I beg you will express to the Committee of Arrangements my regrets, as it would afford me great pleasure to be present on this occasion. Also please express my hearty sympathy with the objects of the Convention, and the assurance that my best efforts shall be given to the promotion of this great work, which to my mind covers one of the most needed requirements of our Western country. As I understand the situation to-day, the desirable improvement is another and separate canal, which cannot be built too quickly, too deep, or too wide, to meet my ideas of the great interests and necessities of the Western Empire, and through which will pass the vast commerce necessary to accommodate its growing and almost boundless demands. Very respectfully,

Your Obedient Servant,

D. M. SABIN.

From SENATOR SAWYER, OF WISCONSIN :

OSHKOSH, June 29th, 1887.

DEAR SIR :—Yours of the 27th at hand and noted. I fully accord with the object of your Convention at Sault Ste. Marie, on the 20th prox.

It is very doubtful whether my business arrangements will admit of being present, but if so, will be with you. I am, sir,

Respectfully Yours,
PHILETUS SAWYER.

From HON. WM. WALTER PHELPS, OF NEW JERSEY :

NEW YORK, June 30th, 1887.

DEAR SIR:—I have received your invitation to attend the Convention of those interested in the unobstructed navigation of the Great Lakes. If it were at all convenient for me to be present at the time I should certainly attend, for I feel a sincere interest in the object of your meeting. Nothing can be of more importance to our country, growing so rapidly in population and business, than the opening of every avenue of commerce to its fullest capacity. I cannot be with you, but what I know of the intelligence and energy of the business men of the great Northwest assures me that your Convention will be an undoubted success.

With thanks, I am,

Yours Truly,

WM. WALTER PHELPS.

From HON. ISAAC STEPHENSON, OF WISCONSIN :

MARINETTE, Wis., June 30th, 1887.

SIR:—I have the honor to acknowledge the receipt of yours of the 24th inst., having reference to the Convention to meet at Sault Ste. Marie July 20th, 1887.

I regret that I am unable to attend on account of my business engagements. I am heartily in sympathy with the idea of improvements to benefit the commerce of the Northwest.

In regard to the amount to be appropriated for such improvements, I think it altogether too small for the purpose designed. It should be doubled, or trebled at least, to show important results.

Very Respectfully Yours,

ISAAC STEPHENSON.

From HON. WM. COGSWELL, OF MASSACHUSETTS :

SALEM, Mass., June 29th, 1887.

DEAR SIR:—I am in receipt of your kind invitation to be present at a Convention in the interest of unobstructed navigation of the Great Lakes, to be held at Sault Ste. Marie on the 20th of July next, which I shall be unable to accept.

I have read with care Mr. Almy's letter, which you sent me. It is a short, clear and strong statement of the case of "The Sault Ste. Marie Canal."

Speaking generally, I have no hesitation in saying that I am a full believer in internal improvement and generous and adequate appropriations by the General Government to carry out the same, and I may add that from personal acquaintance I have great faith in the estimates and opinions of Gen. Poe.

With thanks for your invitation, I am,

Yours Very Truly,

WM. COGSWELL.

From HON. MARK S. BREWER, OF MICHIGAN :

PONTIAC, Mich., July 1st, 1887.

MY DEAR SIR :—Your letter of the 15th of June duly received and contents noted. I hope to be able to attend the Convention called in the interest of navigation at Sault Ste. Marie on the 20th inst., but business matters at present prevent my making a positive engagement to do so. I am in entire accord with the efforts of your Chamber of Commerce and other organizations to improve our lake navigation, and I shall try and be with you upon the occasion named.

I have the honor of remaining,

Very Truly Yours,

M. S. BREWER.

From HON. GEO. E. ADAMS, OF ILLINOIS :

CHICAGO, Ill., June 30th, 1887.

DEAR SIR :—I thank you for your kind invitation to be present at the Convention of July 20th, to be held at Sault Ste. Marie, in behalf of the unobstructed navigation of the Great Lakes. I regret that I cannot be present. I shall be at the East during the month of July. The object of the Convention has my warmest sympathy. The importance of our lake navigation interests is not as yet fully appreciated by the country at large. It should be the duty of every Congressman from the Northwest to see to it that this vast natural interest receives the attention at the hands of Congress which it so fully deserves.

I trust that the Convention will be a successful and interesting one.

Yours Very Truly,

GEO. E. ADAMS.

From HON. B. M. CUTCHEON, OF MICHIGAN :

MANISTEE, Mich., June 27th, 1887.

DEAR SIR :—I am in receipt of your circular letter of the 23d, inviting me to participate in the Convention of organizations interested in the free navigation of the Great Lakes, to meet at Sault Ste. Marie, July 20th. I take a deep interest in that matter, and if I can arrange my other engagements satisfactorily, I hope to be present at the meeting. I shall endeavor to arrange to be there.

Yours Truly,

B. M. CUTCHEON.

From HON. N. P. HAUGEN, OF WISCONSIN :

RIVER FALLS, Wis., June 25th, 1887.

DEAR SIR :—Your favor of the 24th inst., extending to me an invitation to be present at the coming Sault Ste. Marie Convention on July 20th, is received. I thank you for the invitation and shall try to so arrange matters as to be present. But whether present or not, I fully appreciate the importance of Lake Superior navigation, and the development of the great territory which it naturally serves, and shall do at all times all in my power to aid any improvement of the character proposed at the Sault.

Very Respectfully Yours,

N. P. HAUGEN.

Letters were also received from the following gentlemen, expressing an interest in the Convention, and regret at being unable to be present :

Hon. E. P. Allen, Governor Luce, Hon. M. H. Ford and Hon. Justin Whitney, of Michigan.

Henry Cabot Lodge and ex-Gov. Long, of Massachusetts.

Hon. Frank Lawler, Hon. Wm. E. Mason and Hon. Wm. M. Springer, of Illinois.

Hon. C. A. Boutelle, of Maine.

Senator Wm. E. Chandler, of New Hampshire.

Hon. Samuel J. Randall and Hon. John Dalzell, of Pennsylvania.

Gov. McGill and Hon. Thos. Wilson, of Minnesota.

Gov. David B. Hill, of New York.

Hon. Wm. McAdoo, of New Jersey.

Delegate O. S. Gifford, of Dakota.

President Colby, of the Wisconsin Central Railroad.

PERMANENT ORGANIZATION.

The Committee on Permanent Organization submitted the following report, which was adopted :

For President—Hon. T. W. Palmer, Detroit.

For Secretary—Wm. F. Phelps, Duluth, with power to appoint his own assistants. He subsequently appointed as Assistant Secretaries, Bruce Goodfellow, Detroit ; F. J. Marsh, Duluth.

Vice-Presidents—Clinton B. Fisk, New Jersey ; Hon. J. Logan Chipman, Detroit ; Wm. Thurstone, Buffalo ; Wm. H. Chapin, Buffalo ; A. S. Barnes, New York ; J. H. Milne, Chicago ; Judge Isaac Atwater, Minneapolis ; Wm. B. Dean, St. Paul ; G. Waldo Smith, New York ; Hon. Amos Townsend, Cleveland ; Hon. O. P. Stearns, Duluth ; C. H. Spalding, Minnesota ; Hon. H. M. Rice, Minnesota ; Hon. Mark S. Brewer, Michigan ; Hon. John M. Farquhar, Buffalo ; Hon. John Lind, Minnesota ; Hon. Knute Nelson, Minnesota ; Hon. Justin R. Whiting, Michigan ; Hon. Seth C. Moffat, Michigan ; Hon. Jacob Romeis, Toledo ; Hon. Geo. L. Converse, Ohio ; Hon. Henry W. Seymour, Sault Ste. Marie ; Dr. O. N. Murdock, West Superior ; James Bardon, Superior ; F. E. Searle, St. Cloud ; Wm. Orr, Marquette ; R. R. Goodell, Houghton.

Executive Committee—George H. Ely, Chairman, Cleveland ; Hon. Wm. H. Lyons, New York ; W. F. Phelps, Duluth ; A. Foster Higgins, New York ; P. H. Kelly, St. Paul.

On assuming the duties of the Chair, Senator Palmer referred in fitting terms to the importance of the work before the Convention. The Great Lakes, he said, were on the pathway of empire, and the commerce dependent upon these waterways with their connecting rivers, canals,

straits and harbors, were of the highest value to the people and must be improved to their fullest capacity.

The Convention then took a recess until afternoon.

AFTERNOON SESSION.

The Convention re-assembled at 2 o'clock, and was called to order by President Palmer.

Mr. Eustis, of Minneapolis, moved that the Executive Committee be increased from five to nine members. The motion was adopted.

It was then moved that Hon. C. M. Loring, of Minneapolis, be added to the Committee. Carried.

Mr. Eustis moved that Hon. Jay Hubbell, of Houghton, Michigan, be added to the Committee, which motion was adopted.

Hon. John M. Farquhar, of Buffalo, moved that Gen. Clinton B. Fisk, of New Jersey, be made a member of the Committee. Carried.

On motion of Secretary Phelps, the Committee was increased to eleven.

Mr. Milne, of Chicago, moved that Abner A. Wright of that city be added to the Committee. Carried.

Secretary Phelps moved that Mr. E. V. Smalley, of St. Paul, be also added, and the motion was adopted.

President Palmer announced as the next business in order the report of the Committee on Resolutions.

Hon. George H. Ely, of Cleveland, Chairman of the Committee, then proceeded to read the following Memorial prepared by him at the special request of the Committee of Arrangements of the Duluth Chamber of Commerce.

MEMORIAL.

To the Honorable Senators and Representatives of the Congress of the United States :

The Convention held at Sault Ste. Marie July 20th, 1887, composed of delegates from the different trade centers directly interested in the commerce of the Great Lakes, respectfully presents through its officers and its Executive Committee, the following facts and considerations respecting their condition and necessities :

The waterway of the Great Lakes upon our northern border, which stretches from the Atlantic coast to the heart of the continent, has, beyond all others, national relations.

No other one bears upon its bosom so vast a commerce, or touches as this does the vital interests of so many millions of our people.

Eight of the States of the Union, and some of them among our largest,

most populous and most highly productive, border directly upon it. Beyond its western terminus are Territories that embrace over six hundred thousand square miles. Not long hence this area will contain twenty millions of inhabitants, and its water outlet for its surplus products of the forest, the field and the mine, to Eastern and European markets must also be this great water system.

North of this is another Empire, a prairie region under the British flag, nearly one thousand miles square and capable of boundless production of cereals.

This also, already crossed by the Canadian Pacific Railroad, and penetrated by navigable streams on which sixty steamers now find 4,000 miles of good navigation, is also tributary in a large degree to this same water system.

We say "tributary" to it, because the primary products of these enormous areas so distant from markets, can only reach them by water transportation with its low cost. The water route will of course be taken by these products at the western-most point. Under the same law similar products from the East destined for these regions, will be moved as far as possible by water.

At the head of this water system is Lake Superior, larger, deeper and grander than any other. Long after all the other lakes of the system, and the rivers and straits connecting them had been explored, and the territory bordering on them had been settled, this magnificent inland sea lay in distant isolation, enfolded by a wilderness; its stores of mineral wealth, iron, copper and silver, and the agricultural capacities of the vast continental plain beyond, all undreamed of. Lake Superior held the secret of the continent for two centuries, while the explorer and the fur trader coasted along its silent shores. At last her true relations began to be understood.

The head of Lake Superior is 1,400 miles from New York, of which 880 miles are deep water navigation by the lakes. Its outlet is the St. Mary's River. By this channel its waters pass into Lake Huron. There is no alternative channel.

The St. Mary's strait is seventy-five miles long. In this distance there is a fall of twenty feet four inches; eighteen feet two inches of this is at the "Sault." The remainder of the descent, two feet two inches, is distributed over the first thirty-five miles below the "Sault." The channel of this portion of the river is tortuous and navigation through it at night unsafe and not attempted. From a point fifty miles below the foot of Lake Superior navigation is good for the remainder of the distance, twenty-five miles to Lake Huron.

The improvement of the St. Mary's River began in 1852 in the construction of the first lock at the "Sault," a grant of land for which was made to the State of Michigan. This lock had two chambers, each seventy feet wide and 350 feet long between gates, and passed vessels drawing a maximum of eleven and one-half feet of water. This structure opened for business in 1855, met the immediate necessities of the early develop-

ment around the shores of Lake Superior, especially in iron and copper ore productions. The first year's tonnage through the lock was 100,000 tons. Five years later it was 400,000 tons. Ten years later 700,000 tons. In 1875, 1,260,000 and in 1880 1,750,000 tons. By this time the iron ores of Lake Superior, as rich and as pure as any in the world, were supplying one-third of the ore for the total pig iron production of the United States.

Ten years, however, had not elapsed from the completion of this canal and lock before the rapid increase of tonnage demonstrated the necessity of another structure, with largely increased capacity. The construction of the lock now in use gave this. This is one of the grandest engineering works of our time, and the ability which brought it to successful completion, and which has kept it in operation for six years without a single accident or delay to shipping, is worthy of our warmest recognition.

The dimensions of this work are, length 515 feet, width eighty feet, and seventeen feet of water over the miter sill. It was opened for business September 1, 1881. While this work was in progress extensive improvements were made in the canal above the lock and at different points in the river below, by which was obtained nearly an equal depth of water with that carried by the lock—sixteen feet. This increased capacity throughout the entire strait was immensely advantageous to the shipping on the Lakes and to all producing interests. The increased draft of water largely augmented the vessel carrying capacity and diminished the cost of transportation. The saving in the cost of iron ore transportation alone from Lake Superior in the following year was \$800,000. But the tonnage is now again crowding the lock capacity. Congress began to move in the direction of relief by the passage of a resolution December 29, 1881, calling on the War Department "for information" as to what additional "works were necessary on the St. Mary's River and at St. Mary's Falls to complete the improvements thereof in a manner to serve the interests of the commerce of the Northern Lakes."

Under this call Gen. Weitzel, then in charge, reported, January 14th, 1882, recommending "the construction of a dry dock on the canal, the improvement of the Hay Lake Channel and the immediate construction of another lock."

Small appropriations have since been made for the beginning of the Hay Lake improvement and for the beginning of the new lock as recommended.

The Hay Lake improvement is urgent equally with the new lock and both should go on together. When the Hay Lake improvement is completed, under General Poe's project, there will be a straight channel, carrying twenty feet of water the same as the new lock, from the head of Sugar Island and through the middle Nebish to a point of connection with the present channel just below, saving a distance of eleven miles between Lake Superior and Lake Huron. Navigation at night will then be practicable and the heavy losses incurred by our shipping, because day passages only of the river are now possible, will be avoided; that loss was estimated to be on the business of last year not less than \$500,000. Work on the Hay

Lake Channel can be carried on over a line of fifteen miles. With large expenditures this improvement can be completed much in advance of the new lock, and its great advantages be immediately available to vessels.

Gen. Poe, engineer in charge, has recommended some changes in the original project of the new lock which have been approved by the War Department. These plans provide for the grandest and most magnificent structure for hydraulic purposes in the world.

The lock, which will occupy the site of the original lock of 1855, will be 800 feet long, 100 feet wide, and with twenty-one feet of water over the miter-sill. This, then, is the situation on the St. Mary's River; and such has been the history of the thirty-five years since the Government began on this spot to open a passage to the far Northwest. A generation has passed away, but the work has now reached, as to depth of water, one of its final stages. The completion of the works now fairly under way will secure deep water—twenty feet—throughout the entire lake system.

The estimated total cost of these works, now only fairly begun, under small appropriations for each, as reported by Gen. Poe, July 2, 1885, and December 22, 1886, is, for the Hay Lake Channel, \$2,659,115; for the lock and canal, \$4,738,865. The dry dock included in Gen. Weitzel's report has not been commenced. The magnitude of these works, and the time necessary for their completion, together with the enormous increase of the traffic waiting upon them, make up a case of urgency, in respect to provision for the internal commerce of the country, that has never been exceeded. Ten years were consumed, under the meagre appropriations for the work, in bringing the lock of 1881 to completion. The country cannot afford to have a repetition of that policy and of such methods in completing the present works. The interests now are too large and vital. Long before these works can be completed, the traffic on that portion of the lake system will be waiting at the gates. The engineers in charge have sounded no false alarm. Their declared anticipations as to the growth of the tonnage have been exceeded by realities.

Gen. Weitzel, in urging the beginning of a new lock immediately after the completion of the lock of 1881, presented the following considerations: "It, the St. Mary's River, is the outlet by water for the entire country within the Lake Superior 'watershed,' including all the copper mines and a large share of the iron mines found in the northern part of the United States. The copper districts of Michigan had produced, to the end of 1880, 301,054 tons of refined copper, valued at \$142,616,137, and the production of last year was greater than that of any preceding one. The product of the iron furnaces and mines to the end of 1880 was over \$118,000,000 in value, and is rapidly increasing in rate; the increase in the number of mines opened in the last year being greater than any preceding one. The agricultural and lumber interests are in their first stage of development. After the exhaustion of the supply of lumber in the districts tributary to Lakes Michigan and Huron, which is not far distant, the Lake Superior region will be the principal source of lumber supply in the Northern States.

"This water route is also the natural outlet for the vast region west and northwest of it in the United States and British America, including not only the rich mineral districts in the extreme West, but the fertile valleys of the Missouri, the James, the Red River of the North and the Saskatchewan, destined to be in the near future the principal wheat-producing region on the continent.

"This region is nearly destitute of fuel, which must be supplied in a great measure from the coal fields of Pennsylvania and Ohio. The carrying of wheat, flour, lumber, coal, salt and other articles supplied or needed by the vast region tributary to Lake Superior will, in the near future, equal or exceed in importance the transportation of iron and copper."

Gen. Poe, in his annual report, July 21, 1885, said upon this subject: "Scarcely had vessels drawing more than twelve feet begun to use the channel before a demand sprung up for a still greater depth. The commerce using it also increased enormously, until it is now evident that at an early day additional lockage facilities must be supplied to the canal which forms part of the route.

"Only eleven per cent. of the freight passing the canal during the season of 1884 was carried in vessels the draft of which would permit the use of the old locks.

"The amount of freight passing the canal has increased from 1,567,741 tons during the season of 1881 to 2,874,557 tons in 1884, or in the three years an increase of 1,306,816 tons, or 83.25 per cent. in the amount of freight actually passing the canal in one season.

"Should this rate of increase continue, the present lockage system will be insufficient to pass the commerce long before it can be, in the usual course of appropriations for river and harbor improvements, enlarged to meet the greater demands upon it.

"For the fifteen years preceding 1884 the annual increase in the registered tonnage using the canal was comparatively uniform, and averaged about 107,313 tons.

"In 1884, however, the increase was 955,578 tons. This increase was alone equal to the entire commerce through the canal from 1855 to 1860—the first five years the canal was in operation—and is well calculated to startle all who feel any interest in the route by lake between our great Northwest and the seaboard.

"It urges in the strongest way that the work of preparing to take care of a commerce greater than the present canal and lockage system could accommodate shall be entered upon without delay."

These official statements are most significant and impressive.

The tonnage of 1886 through the canal showed a large increase over any previous year. Gen. Poe states that on July 15 sixty-seven vessels passed through the locks. The average number passing per day during the month of June was forty; for July, 41½; for August, 40½; and the daily average for these three months was 40¾. For the same period the daily average of freight passing was 23,371 tons. On July 28, 1886, sixty-three

vessels, carrying 43,442 tons, were locked through, which was the largest freight tonnage in one day.

The registered tonnage passing the canal during the season of 1886 was 4,219,397 tons, the freight tonnage 4,527,759 tons. The ratio of increase over 1885 was 39 per cent. The increase in freight tonnage over that of 1885 was 1,271,131 tons, of which sixty-seven per cent. was in the single item of iron ore, although there was an increase in every item except silver ore. The estimated value of products passing in 1886 was \$69,080,071—twenty-nine per cent. increase in the value of each commodity over 1885.

In this connection some comparisons made by Gen. Poe of cost of construction and the traffic of the Suez Canal, built for the accommodation of the commerce of the world, and this canal, are surprising and very important.

The cost of the Suez Canal down to and including the year 1877 was in round numbers not less than \$92,000,000.

The United States has expended on the St. Mary's Falls Canal to date, including the original land grant of 750,000 acres at \$1.25 per acre, \$3,087,500. This includes all constructions, repairs and improvements, but does not include the cost of operating the canal, which averages \$30,000 per annum, for which no charges are levied.

In 1886 the Suez Canal accommodated 5,767,756 tons during the 365 days, or an average per day of 15,802 tons.

During the two hundred and twenty-three days of 1886 in which the St. Mary's Falls Canal was open to navigation, it accommodated 4,219,397 registered tons, or an average of 18,837 tons per day, or in a little greater proportion to the daily commerce of the Suez Canal than 1 2-10 to 1.

The business of the Suez Canal in 1886 showed a decrease from 1885 of 524 vessel passages and of 568,097 official net tons. The St. Mary's Falls Canal showed an increase during the same time of 2,075 vessel passages and of 1,183,460 registered tons.

The net receipts of the Suez Canal for 1885 were \$13,009,909, or an average of a little more than \$2.05 per ton on its business.

If tolls at the same rate had been charged on the 4,219,397 registered tons which passed the St. Mary's Falls Canal in 1886, the receipts would have amounted to \$8,640,295, or nearly three times the cost of the canal to the United States to date; a sum larger than all past (\$3,087,500) and proposed (\$4,738,865) expenditures by the government on this canal.

But to return. The cause of the large increase in the item of iron ore in 1886 will be immediately recognized. Two new iron ore districts have been opened on Lake Superior, and have begun to pour their mineral treasures into the commerce and production of the country—the Vermilion district in Minnesota and the Gogebic district in Michigan and Wisconsin. The ore deposits in both cases are very extensive, and already well equipped as they are with railroad facilities for moving the ores to the Lakes, their contributions to the iron and steel manufactures of the country will rapidly and permanently increase. From these two sources

of tonnage alone, unknown to the world five years ago and never included in any calculations of tonnage to pass here, have already come 1,469,073 tons. The freight passing here this season from these two new ore districts alone will be about 1,400,000 tons, and these ores go to Chicago as well as to the lower lakes. But what else made up this 4,527,759 tons carried through the canal by 7,424 passages of vessels?

There were 1,010,000 tons of coal and 115,208 tons of manufactured iron and steel and pig iron going from Ohio and Pennsylvania, and 158,677 bbls. of salt from New York and Michigan to the Northwest; and there were 1,750,365 bbls. of flour, 19,706,858 bushels of wheat and other grains, and 138,688 millions feet of lumber, with wool from Montana, and 2,000 tons of silver ore out of the far Northwest destined for our Eastern markets and Europe.

The tonnage of 1887 it is now ascertained will show an enormous increase over that of 1886.

Gen. Poe has placed in our hands the following tabular statement of this season's business down to midnight of yesterday. No comment is necessary to deepen the profound impression that must be made by this record.

Statement of business of St. Mary's Falls Canal, Mich., from the opening of navigation for the season of 1886 and 1887, up to midnight of July 19 of each year:

	1886.	1887.		
Number Vessels.....	2,987	3,700	Increase	714
Number Lockages.....	1,466	1,630	"	164
Registered tonnage—tons.....	1,679,835	1,961,202	"	281,367
Freight tonnage—tons.....	1,662,425	2,142,868	"	480,443
Average daily registered tonnage.....	19,533	24,515		
Average daily freight tonnage.....	19,330½	26,786		

Estimate for whole season of 1887, 220 days, registered tonnage 5,393,300 tons.

Estimate for whole season of 1887, 220 days, freight tonnage, 5,892,920 tons.

Greatest freight tonnage passed in one day (1887) 50,729 tons, which was carried by seventy-one vessels.

On the 3d of June, 1887, forty-nine vessels passed the canal carrying 49,258 tons of freight, or an average of a little more than 1,000 tons per vessel.

Our estimate of the ultimate capacity of the lock is ninety-six vessels in twenty-four hours, or one vessel for each fifteen minutes. Already we have passed in one day during June, 1887, eighty-four vessels.

To this Gen. Poe adds the following: "But now we are face to face with the fact that during the month of June, 1887, alone, the commerce through the canal amounted to fifty per cent. more than for a whole year as it existed at the time the enlargement was projected, and that it is increasing right along at such a rate as to outrun the wildest predictions of ten years ago."

There are now engaged in the commerce of the Lakes nearly 1,900 American vessels. They represent an investment of \$40,000,000 capital. Some of these ves-

sels are of sufficient capacity to carry at a single trip the grain that would load ~~three~~ five freight trains of thirty cars each, with over 600 bushels per car. A crop of a 4,000 acre Dakota wheat farm went through the canal yesterday on a single one of these great carriers.

The increasing demand for tonnage has brought into use every resource of wood and iron ship building on the Lakes. There are now under construction sixteen steamers that will cost \$200,000 each, and nineteen that will cost \$135,000 each, an additional investment afloat this year of \$5,765,000. The average carrying capacity of this new tonnage will be, on the present depth of water, 2,100 tons, save upon the St. Mary's River, the entrance to Lake Superior. This capacity will be largely increased for the Lake Superior trade by the additional four feet of water contemplated by these improvements, the increase being estimated at 33½ per cent.

But the relations of Lake Superior and its outlet are as broad as the continent itself. Deep water navigation, does now and it forever will, draw to the head of Lake Superior the primary products of the great agricultural region of the continent, and from that point also will be distributed heavy products from the Eastern States.

That region, nearly all of it naturally tributary to Lake Superior, includes portions of Kansas, Nebraska, Colorado, Iowa and Wisconsin, and the whole of Minnesota, Dakota, Montana, Wyoming and the Canadian Provinces. The population of Minnesota alone is now estimated at 1,840,000, and her products of the soil, of stock and its products, of mines and manufactures this year will be \$321,875,000.

It will be at once recognized that the wonderful and continuing growth of St. Paul, Minneapolis and Duluth have contributed largely to the impressiveness of these statistics.

The area of Minnesota, Dakota, Montana, Wyoming and Manitoba is 616,362 square miles. Their population is now estimated at 3,000,000.

	1885.	1886.
The value of the live stock and products.....	\$251,596,834	\$377,846,027
Soil products.....	149,909,839	208,170,762
Mining and Manufactures.....	190,529,217	332,985,362
Total.....	\$592,198,890	\$919,002,151

But these statistics represent only the beginning of the productive capacity of these vast areas.

Into them all population is moving rapidly and railroad construction is proceeding on a scale to meet its transportation necessities. Railroad systems, however, now pushing out into this domain recognize the necessary direction of these products toward the head of Lake Superior and they are building accordingly. Rail and water transportation, in combination and co-operative with each other only, have made possible the settlement and marvelous development of the Northwest already attained. A large portion of the trans-continental traffic of the Northern Pacific and the Canadian Pacific railways will be no exception to this law—the

concentration of traffic to points of water shipment. Much of the tonnage from Asiatic and Australian sources and from the Pacific slope over these roads will also take the water at the head of Lake Superior for the remainder of its journey over the continent. There, too, are harbor accommodations, natural and improved, for all the exchanges between the East and the West; for all the traffic that will ceaselessly and forever flow over long radii to this spot. The inevitable operation of this law of movement has been illustrated by the fact, that the point of largest receipts and shipments of wheat has already been shifted from Chicago to Duluth.

The receipts of wheat at Chicago in 1886 were.....	15,982,524 Bushels.
The shipments of wheat from Chicago in 1886 were....	15,507,763 "
The receipts of wheat at Duluth in 1886 were.....	22,425,730 "
The shipments of wheat from Duluth in 1886 were....	17,981,985 "

The bearing of these facts and statistics upon the great questions before the Convention--the future business of Lake Superior and the entirely inadequate provision for it on the St. Mary's River, is most obvious and significant.

Lake Superior and all its transportation dependencies have for many years been deprived of advantages enjoyed by other members of the Lake system. The magnitude of this injurious discrimination can never be realized. A computed cost of movement of the entire tonnage of the canal for twenty-five years on ten to eleven feet of water, as against a computed cost of the same on fourteen to sixteen feet of water, would only approximate its extent.

The lock of 1881, under slow and meagre appropriations, was ten years in building. IT WAS OUTGROWN BEFORE COMPLETION. In any event several years will be required for the completion of the present undertakings. PENDING THAT RESULT, OUR LARGEST VESSELS, WILL OF COURSE, BE PRACTICALLY EXCLUDED FROM THE LAKE SUPERIOR TRADE.

We need hardly advert to the enormous risk of dependence upon a single lock, but the commerce and production of the country are now carrying that risk.

Should accidents occur to obstruct or to interfere with the perfect mechanical adjustments of the machinery of the present lock, and the lockages be suspended for a single month of the navigation season, the loss and injury would be irreparable.

The existing conditions then, upon the St. Mary's River, require most prompt and vigorous action on the part of the Government.

Here as well as elsewhere throughout the Lake system, twenty feet or more of water should be secured as quickly as money, skill and engineering ability can be made to overcome natural obstacles. Every dictate of prudence, justice and wise economy requires this; and as most directly and powerfully contributing to this end the necessary appropriations OF THE TOTAL AMOUNT REQUIRED for the completion of the lock and the Hay Lake Channel improvement should be made at once. Their economical expenditure, under the plans already approved by the War Depart-

ment, may safely be left to the capacity and to the integrity of the engineers in charge.

In view, therefore, of existing conditions upon this waterway of the Great Lakes, this Convention, representing their widely extended relations, hereby respectfully and most earnestly appeals to your honorable body for the immediate completion of the work now in progress on the St. Mary's River.

The Great Lakes, as an instrument for effecting commercial exchanges, are of priceless value to our people. They belong, with all their magnificent equipment for securing transportation at the lowest possible cost and thus enhancing the value of products, to the people.

Their capacity, however, to perform this service is now seriously restrained and limited by the obstacles on this channel connecting Lake Superior and Lake Huron.

Notwithstanding the magnitude of the present tonnage movement through this channel, population and production are now fully abreast of transportation facilities. There is no provision for the enormous increase of tonnage now full in view.

Further reduction, too, in the cost of transportation on the Lake Superior branch of the lake system must await the deeper water, which the lock and the Hay Lake Channel, when completed, will give.

Can the country afford to withhold from immediate use the additional four feet of water which will be secured by the completion of these two projects, long since approved by the War Department?

That will be, to our people, one of the richest material gifts ever conferred by the Government. Long before it can be enjoyed, however, even by the freest possible expenditure of money, the East and the West will wait here for passage.

Weighed against the interests at stake, the amount to be appropriated is really of small importance. TIME, however, is invaluable.

We respectfully and most earnestly urge, therefore, the prosecution of these works to completion by means of every appliance at command of the Government, and as a means to this end we ask for the appropriation at once of the total amount of money required, or for the appropriation annually of such sums as can be economically expended.

GEORGE H. ELY, Cleveland, Ohio,

Chairman Committee on Memorial.

Sault Ste. Marie, Mich., July 20th, 1887.

At the conclusion of the reading of the memorial Mr. Ely presented, pursuant to the instructions of the Committee, but separately from the memorial, a resolution offered by Mr. Hubbell, of Michigan, favoring the purchase by the Government of the Portage Lake Canal and Portage River improvements.

Mr. Nelson, of Minnesota, moved the adoption of the memorial but opposed the resolution.

Mr. Hubbell moved the resolution as an amendment to the motion of the gentleman from Minnesota, supporting the proposition with a strong argument, showing that the purchase had been recommended by a commission of army engineers acting under the orders of the War Department, for the reason that it afforded a harbor of refuge much needed from Lake Superior, and it shortened the distance around Keweenaw Point twelve miles. Mr. Hubbell argued that this amounted to an additional round trip each season for vessels engaged in the Lake Superior trade. If the deepening of Hay Lake Channel, shortening the distance twelve miles, made a difference of \$500,000 a year to the freight interests, the shortening to be effected by the Portage Lake Canal and River improvement would be something enormous, considering that the purchase price is only \$350,000.

Mr. Nelson thought it was inadvisable to embarrass the main question, which was the enlargement of the canal, with any side issues. He believed the President had refused to sign the River and Harbor bill passed by the last Congress because it contained measures like this, of minor importance. He believed it would be better to take this matter into consideration and ascertain what the attitude of the President was before forcing obnoxious measures upon him. Another thing of importance was the votes of Southern members, and they would not be induced to vote for anything that seemed like private measures. The fact that these canals were private property, held within a single State, and not essential to inter-state commerce, would induce the opposition of Southern members. He did not think it safe to jeopardize the main question by such action.

Congressman Moffat, of Michigan, opposed the views of Mr. Nelson and asserted that there was not the slightest objection in either House of Congress to the purchase by the general Government of the Portage Lake Canal, and that the President had not pocketed the bill upon any grounds except that it was passed in the closing hours of the session and he could not have time to scrutinize it.

Judge Atwater, of Minneapolis, thought the adoption of Mr. Hubbell's resolution would convey to Congress the idea that this Convention attached as much importance to the Portage Lake Canal as to the enlargement of St. Mary's Canal. He was not willing to do that, and moved a division of the question.

Judge Stearns, of Minnesota, said he favored the purchase of the Portage Lake Canal, but did not wish to see the proposition to do so attached as a rider to the main question.

Mr. Hubbell withdrew his resolution as an amendment, and the memorial as read by Mr. Ely was unanimously adopted.

Upon the adoption of the memorial Mr. Hubbell again offered his resolution as an independent proposition, expressing the belief that for the Convention to be silent upon the Portage Lake Canal was a tacit admission that it was more of a private than a public measure.

Mr. Farquhar replied that the Convention could put the Portage Lake Canal purchase in no better shape than that in which it already stood before Congress, with unanimous reports in its favor by Committees of both Houses. He would not handicap the \$7,000,000 needed for the St. Mary's Canal project with any such resolution.

Mr. Hubbell defended his resolution as promotive of the highest interests of inter-state commerce. Gen. Abbott had reported that ninety per cent. of the commerce passing through it originated outside of Michigan.

Judge Chipman, of Michigan, said that everybody admitted that the enlargement of the St. Mary's Canal was the principal thing. Nor did Mr. Hubbell's resolution ask anything of this Convention but an expression in favor of the Portage Lake Canal, which he thought ought to be given. He said he greatly admired the President, and had every respect for him personally and officially, but upon questions of this kind did not stop to consider what the President thought of it. He thought it a new thing for the American people in Convention to refrain from taking action upon any subject until the President's feelings had been ascertained.

Mr. Blakeley, of St. Paul, thought the resolution was not in order, not being germane to the objects of the Convention, and requested that the Secretary would read the call.

The call having been read, Mr. Dean, of St. Paul, said that while it was perhaps desirable for the Government to purchase and improve the Portage Lake Canal, yet he felt, and most of the delegates to the Convention felt, that the St. Mary's Canal is the principal thing and that it alone was embraced in the objects specified in the call. He therefore moved that the resolution lie on the table, and the motion prevailed by sixty-seven yeas and thirty nays, the objection to its consideration being a purely parliamentary one.

Mr. Townsend, of Ohio, moved that a committee wait upon Gen. O. M. Poe, U. S. A., in charge of the improvements of the St. Mary's Falls Canal and River, and invite him to address the Convention. Carried.

Mr. Eustis, of Minnesota, moved that the Executive Committee be increased to thirteen and that Henry W. Seymour, of Sault Ste. Marie, and James R. Smith, of Buffalo, be added thereto. Carried.

Gen. Poe was then introduced to the Convention by the Chair and made a most interesting statement of the growth of the commerce through the canal and of the work to be done upon the new lock and in Hay Lake Channel. He brought the statistics of the canal down to midnight of the 19th for the past fiscal year, showing an increase in vessel passages thus far over last year of 714, increase of tonnage 483,000 tons. Eighty-four vessels had been passed through the canal in one day. The estimated maximum number was ninety-six. One day last June forty-nine vessels passed through, carrying upwards of 49,000 tons—over 1,000 tons to the vessel. The average daily tonnage this year is 26,788, which he compared with the 15,000 tons passing daily the Suez Canal, thought to be the most important on the globe. Altogether he estimates an increase to 6,000,000 tons—1,500,000 tons over last year. The work to be done in enlarging the canal and deepening Hay Lake Channel might be done in five years if the money were appropriated and made available. He could make better progress if \$1,000,000 were appropriated at once than with two appropriations of \$500,000 each. He did not mean that he could expend a million in a year, but contractors could be employed upon different branches of the work, greatly expediting it as a whole. Of the present appropriation about \$125,000 was unexpended at the present time.

Questioned by Secretary Phelps as to the length of time required for the completion of the new lock, provided ample appropriations could be secured, Gen. Poe believed the work could be done in five years. One million dollars a year he thought, could be economically utilized if the appropriations were made in season.

At the conclusion of the General's remarks the Convention honored him with three hearty cheers.

Mr. Seymour, of Sault Ste. Marie, was next introduced and spoke at considerable length upon the importance of the improvements in progress at the canal and upon the river below.

Mr. Thurstone, of Buffalo, offered the following resolution which was unanimously adopted :

Resolved, That a vote of thanks be and hereby is tendered to the citizens of Sault Ste. Marie for the cordiality shown the delegates attending the Convention and the efforts made to entertain them during their short sojourn ; and further be it

Resolved, That this resolution be entered upon the minutes and published in the proceedings.

General Clinton B. Fisk, of New York, addressed the Convention, very impressively pointing out the importance of the work it had per-

formed, and the influence which the opening of these great waterways must exert, not only upon the commercial, but the moral and religious interests of the people of the United States. He closed with the suggestion that the Rev. Mr. Lewis, of Illinois, be invited to close the proceedings of the Convention with prayer. Mr. Lewis being called to the platform by the Chairman, invoked the Divine blessing upon the labors of the day, at the conclusion of which the Chairman declared the Convention adjourned sine die.

ADDENDA.

STRIKING COMPARISONS.

BY WM. B. DEAN, OF ST. PAUL.

THE SAULT STE. MARIE CANAL AND THE TRADE OF
THE EAST INDIES.

BY G. WALDO SMITH, OF NEW YORK.

LETTER TO CONGRESSMAN FARQUHAR.

BY FRANCIS ALMY, OF BUFFALO.

ADDENDA.

STRIKING COMPARISONS.

BY MR. DEAN, OF ST. PAUL.

W. F. Phelps, Esq., Secretary Chamber of Commerce, Duluth, Minn.

DEAR SIR :—It affords me pleasure to comply with your request for a statement of some of the comparative facts bearing upon the importance of the Sault Canal, about which we talked during our trip from the recent Convention.

It is almost superfluous to attempt to add to the able memorial adopted by the Convention, or to the lucid exhibit and comprehensive statements made by Gen. Poe, but it has seemed to me we could the better realize the stupendous figures required to state the business of the canal by comparing their value and magnitude with other facts relating to the commerce of our country. In this way we can the more clearly estimate the vast importance of the work which the Convention was called together to consider.

If Gen. Poe's estimate of the traffic passing through the canal during the season of 1887 is confirmed, and it reaches the total of nearly six millions of freight tons, of a probable value of ninety millions of dollars, it will exceed the valuation of the personal property as returned by their officials for the years 1884 and 1885 of any one of the States of Alabama, Arkansas, Kansas, Louisiana, Minnesota, Mississippi, North and South Carolina, Rhode Island, Virginia and West Virginia. (1)

The sum will also exceed the value of the total importations of merchandise into the United States from foreign countries for many of the years prior to 1844. (2)

The Statistical Abstract, published by the Bureau of Statistics in January, 1887, shows that at no single port of the United States, excepting New York, do either the imports or exports (3) for the year 1886 attain the value of the commerce which it is estimated will pass through the Sault Canal in 1887.

1. American Almanac, 1887, page 105.

2. American Almanac page 74.

3. 9th number of Statistical Abstract of the U. S. page 43.

The same number also shows that with the exception of Great Britain and Ireland there is no country in the world which we either export to or import merchandise from, equal in value to the amount (4) of that which will this year find its way through the canal—a most wonderful illustration of the greatness of the internal commerce of our country, as well as of that borne upon the waters of Lake Superior.

The startling comparison of the tonnage of the Sault Canal, compared with that of the Suez, is well exhibited in the paper prepared for the Convention. This is only emphasized by a comparative view of the registered tonnage, both sail and steam, of the United States employed in the foreign and coast trade and the fisheries for the year 1885, which is shown in the report of the Register of the Treasury for the year 1885, to be 4,265,934 tons (5) or 261,825 tons less than reported by Gen. Poe as passing through the Sault Canal in 1886.

If the tonnage for 1887 shall reach the anticipated amount of six million tons, as it almost certainly will, this enormous sum will be equal to almost one-half of the ocean tonnage, either entered or cleared from all seaports of the United States, to all the countries on the globe in the year 1886. (6)

The Sault tonnage being largely of raw staples, such as grain, lumber, iron ore, coal, etc., of course its value would not compare with the ocean tonnage in the same ratio.

It is notable, also, that the canal tonnage for 1887 will be equal to about two-thirds of the entire tonnage transported by rail in the State of Minnesota in 1886, to carry which required 4,400 miles of railroad, costing \$153,000,000. (7)

As great as is the tonnage which now depends upon the facilities afforded by the Sault Canal for reaching the markets to which it is destined, the amount is really insignificant compared with what it will be when our vast Western prairies become the homes of the millions who will soon possess them.

The last census shows less than ten inhabitants to the square mile in Minnesota and less than one in Dakota. When these empires are populated as densely as Illinois and Indiana, with their fifty-five producers and consumers to the square mile, and all the tributary states and territories shall gather in the crowding multitudes, the commerce which must then find its way through Lake Superior will make the work projected by the Convention seem like a most puny effort to measure the traffic for which a more liberal future must provide.

The necessity of developing the waterways of the nation so as to afford the surest competition with its railway systems, and the more certain regulator of the charges for transportation is well illustrated by the Erie Canal.

This canal cost the State of New York about fifty-two and a half

4. 9th number Statistical Abstract of the U. S. page 49 et. seq.

5. 9th number Statistical Abstract page 161.

6. 9th number Statistical Abstract page 153, et. seq.

7. Report R. R. Commissioners of Minnesota.

millions of dollars. The greatest amount of tonnage transported in one year was about six and a half million tons, (8) but little more than will pass through the Sault Canal during the season of 1887. And yet a high authority has said "The Erie Canal has done more to advance the population, wealth and enterprise of the Western States than all other causes combined."

Certainly if the State of New York alone, by its wise liberality has conferred upon the people of the whole country such an immense benefit, the obligation is immeasurable upon our National Government to open wide the channels of the Great Lakes to the fullest requirements of their growing commerce. The amount prayed for in the memorial is but a paltry sum measured by the benefits to be bestowed.

The Canadian Government, with a sagacity which should provoke the emulation of our National Legislators, has expended upon the St. Lawrence system of canals, commencing with the Welland and ending with the Lachine, up to 1882, the sum of \$34,874,576.00, and yet the total tonnage reported as passing in 1883 was only 1,861,942 tons, (9) or only about one-third of the Sault tonnage for 1887.

It was a wise act which liberated the mouth of the Mississippi River from the obstructions that barred the commerce of the Southern States, and every patriotic citizen is justly proud of the achievement of Capt. Eads in his successful work. To secure and maintain a depth of water of thirty feet, the government agreed to pay him six and a half millions of dollars, (10) although over two millions of dollars had already been expended in abortive attempts to obtain what Capt. Eads has accomplished. Yet the total tonnage which enjoys the benefits of this great improvement, as shown by the vessels entering and clearing from the port of New Orleans during the year 1885, was only 1,331,697 tons, (11) or less than one-fourth of the estimated Sault Canal tonnage for 1887.

Just at this time some anxious fears are created by the fishery disturbances with our Canadian neighbors. It must be national honor which confers such momentous dignity on these fish catching privileges. It certainly cannot be their value which has caused two great nations to wrangle many years over an adjustment which should have been reached long since. The census of 1880 shows the value of the whole product of the New England fisheries for one year to be only fourteen million dollars, (12) or less than one-sixth the value of the commerce which this year seeks its way through the Sault Canal.

The present rate charged for transporting merchandise from Buffalo to Duluth averages about thirty per cent. more than from Buffalo to Chicago, the distance being substantially the same. When the largest sized vessels can move with the same facility through the canal as they now do through the Strait of Mackinac, this difference will at once disappear and

8. Reports History of New York and Commonwealth Series.

9. Report of the Internal Commerce of the U. S. May 6, 1885, page 445, Treasury Department.

10. See U. S. Statutes at large, Vols. 18, 19, 20 and 21.

11. Statistical Abstract 1886.

12. American Almanac 1886 page 355. Extract from 1880 census.

our producers and consumers will enjoy the great reduction which must follow.

It would be an ungracious work, probably, to tabulate some of the munificent appropriations by the Government for rivers and harbors and compare the amounts with what we ask for the Sault Canal improvements, and set over against them the value of benefits to be conferred.

The peril which constantly menaces the commerce of the whole Northwest, in the liability to injury or destruction of the present canal and lock at the Sault, a disaster which a misunderstanding of signals by engineers or pilots of vessels, or a derangement of their machinery may bring about at any time, and the enormous traffic which with growing importunity presses continually upon this single precarious channel of communication, must enforce the necessity of prompt and liberal action on the part of Congress.

Yours Truly,

WM. B. DEAN.

St. Paul, August 13th, 1887.

THE SAULT STE. MARIE CANAL AND THE TRADE OF THE EAST INDIES.

BY MR. SMITH, OF NEW YORK.

SEA CLIFF HOUSE,

LONG ISLAND,

August 22d, 1887.

Mr. W. F. Phelps, Secretary.

DEAR SIR :—Referring to our conversation while at Sault Ste. Marie in attendance upon the Convention, I would suggest that while much was said by the speakers and in the memorial in regard to the phenomenal growth of the business of the canal in the past few years, and of the certainty of its future increase from the development of the ore and lumber business of the Lake Superior region, and from the agricultural development of Minnesota, Dakota and Manitoba, yet little was said of a trade that must soon assume vast proportions and become marvelously valuable to the mercantile interests of the United States and in which the Sault Ste. Marie Canal will be an important factor.

For many centuries the trade of China and India has been the great prize for which the commercial nations have contended.

When Columbus discovered America he was not alone in search of a new Continent, but of a shorter route to the countries producing silks, teas, coffees, drugs and spices and all the rich Indian goods so much in demand by Western nations.

For more than three hundred years the English and Dutch have enjoyed a practical monopoly of this trade and indeed the great wealth of London, Liverpool, Brussels and Antwerp have been largely derived from this source.

The great motive which in part prompted the stupendous undertak-

ing of building the Suez Canal was the same as that which prompted Columbus to undertake his perilous voyage.

Now it is a commercial fact that cannot be disputed that goods will eventually seek the shortest route between the point of production and the point of distribution. The saving of a few days of time or a lower rate of freight or insurance have often destroyed old trade centers and built up new ones.

Now what relation does the Sault Ste. Marie Canal bear to the transportation of goods from the East Indies ?

The tunneling of the Cascade Mountains in Washington Territory which will soon be an accomplished fact, will bring Duluth within 1,800 miles of Puget Sound, thus bringing the waters of the Pacific Ocean within 1,800 miles of navigable waters flowing directly into the Atlantic Ocean through Lake Superior, the Sault Canal and the Erie Canal. This will bring New York within 10,500 miles of Canton, China, while by the Isthmus of Suez it is 20,500 miles, by the Cape of Good Hope 22,500 miles, and while the English and Dutch cities before alluded to are not less than 18,000 miles distant.

These facts make it certain that New York must eventually capture the great commercial prize of the world and become the chief distributing point of our Asiatic goods, not only to all North and South American Atlantic ports, but to all European and African Atlantic ports also.

Little did DeLesseps think when digging his great waterway across the Isthmus of Suez, called the Suez Canal, that there was a Sault Ste. Marie Canal in the heart of America which would soon become its most important rival, and one of the greatest factors in bringing about such tremendous changes in the commerce of the world.

The same agencies which will operate to give Eastern cities the India trade of all Atlantic Ocean ports and peoples, will operate to give our Western cities the monopoly of the trade of the great Mississippi Valley, and this the Eastern merchants will have to relinquish and seek for compensation in reaching out for the vast trade now controlled by European cities. There soon will be seen passing through the Sault Canal, not only boats laden with grain, lumber and ore, but also with the rich goods of India, seeking for a European market.

Yours Truly,

G. WALDO SMITH.

LETTER TO CONGRESSMAN FARQUHAR.

FROM FRANCIS ALMY, OF BUFFALO.

[EXPLANATORY NOTE.—The statements in the following pages, "showing the present condition, growth and requirements of the commerce from Lake Superior by the lower lakes," were prepared January last in the form of a letter to the Hon. John M. Farquhar, member of Congress from Buffalo, N. Y., by Francis Almy, Esq., Secretary of the Lake Carrier's Association of that city, for the information of the Committee on Rivers and Harbors of the two Houses respectively. A copy of the letter having been kindly forwarded by the author to the Secretary of the Duluth Chamber of Commerce, and by him read to the Board of Directors, its facts and figures were deemed so

important in view of the Convention of the commercial organizations interested in the unobstructed navigation of the great lakes to be held at the Sault Ste. Marie July 20th, that by a unanimous vote 2,000 copies were ordered printed in pamphlet form for the information of the delegates and for general distribution. In consenting to the publication, Secretary Almy interposed the condition that it should be stated that "the letter represents but little original work, being simply a compilation from various sources, and mainly from the official reports and other papers of Gen. O. M. Poe, of the United States Engineers, in charge of the improvements at the Sault Ste. Marie River."

It was believed that a careful perusal of the statements by the delegates prior to the meeting of the Convention would thoroughly prepare them to take such action as the "condition, growth and requirements of commerce" demand.]

BUFFALO, January 18th, 1887.

Hon. John M. Farquhar, Washington, D. C.

SIR :—Mr. Caldwell has asked me to prepare and send to you as per your request to him, a statement showing the present condition, growth and requirements of the commerce from Lake Superior to the lower lakes.

The through commerce from Lake Superior is conveniently measured by the shipments through the St. Mary's Falls Canal, connecting Lakes Superior and Huron, and its volume is affected by the conveniences there afforded. This canal is about a mile in length and the fall from lake to lake is eighteen feet. The old locks, built in 1855, were two in number, each seventy feet wide and 350 feet long between gates, and could not as a rule accommodate vessels drawing more than 11½ feet. There passed through the canal in the first year a trifle over 100,000 tons of freight. In 1860, five years later, this had increased to 400,000. In 1865 it was about the same; in 1870, 700,000; in 1875, 1,200,000; and in 1880, 1,750,000 tons. The property was then transferred by the State of Michigan to the United States, and the present lock was first opened for use September 1, 1881. This is a magnificent structure, eighty feet wide, but narrowing to sixty feet at the gates, with a length of 515 feet, and with seventeen feet of water over the miter sill at the ordinary stage.

The freight movement increased at once with the new accommodations, and in 1883 only eleven per cent. of the vessels passing through the canal were sufficiently small so that they could have gone through the old locks, the only ones in use but two years before. In 1882 the season's tonnage had reached 2,000,000 tons, in 1885 it had passed 3,000,000, and in 1886 (last year) it was considerably over 4,500,000.

The number of vessels passing through the lock in 1886 was 7,424, an increase of thirty-eight per cent. over 1885. Four vessels of average size can be locked through together. The average time consumed in a lockage is one hour. So that, estimating its capacity under the most favorable conditions, with vessels of convenient size arriving up and down in groups of four, in such order that immediately following a lockage in one direction another group of four may be locked through on the return, and without interruption in the movement, night or day, ninety-six vessels might be locked in twenty-four hours, or 2,976 vessels in a month of thirty-one days. In July 1886, 1,295 vessels passed through the lock. Should the number of vessels continue to increase in the same ratio as this last season, in three years the above abnormal capacity allowance will have been

exceeded. The practical working capacity of the lock will have been reached sooner. For it must be remembered that in practice the vessels will not arrive uniformly. Not only will the commerce at certain seasons be greater than at others, but owing to the fact that the navigation by night below the Sault is impossible at present, and will be for seven years certainly, or until the Hay Lake Channel improvements can be completed, there is always a scarcity of boats during the night, and a great accumulation of boats awaiting lockage in the morning. So that, taking the practical working capacity of the lock, it will be reached in 1888, should the number of vessels increase in this season's ratio.

It is not probable, of course, that the number of vessels will so largely increase. The tendency is rather to increase in size than in number of vessels. In 1885 a less number of vessels passed through the lock than in 1884, though they carried thirteen per cent. more freight. Yet taking the vessel passages for a series of six years, in this time they have more than doubled, and at the same rate we might expect a blockade in about six years hence, under the most favorable conditions.

In his report for 1884, Gen. O. M. Poe, of Detroit, Lieut. Col. of U. S. Engineers, in charge of these improvements, recommended a new lock on the site of the old ones, seventy feet in width, 700 feet in length, and twenty-one feet of water on the miter sill.* (These dimensions he holds subject to revision.) This lock would be used in connection with the present new one, which is all that can be desired for no greater draught than seventeen feet. Gen. Poe estimates the cost of the proposed new lock at \$1,700,000. Of this amount \$250,000 was appropriated by the River and Harbor Act approved August 5, 1886. The improvement, with sufficient appropriations, can be completed by 1891, and this is none too soon, as is shown by the preceding estimates. It is of the utmost importance that Congress should make annual appropriations for the next two or three years, of \$500,000 or more, as Gen. Poe may desire.

The blockade to commerce which would ensue should any accident happen to the present lock before the new one is completed, is something appalling to think of. The injury arising from the carrying away of the lower gates (the accident most to be feared) and the consequent pouring through the lock of the great volume of water under a head of eighteen feet, might be so great, Gen. Poe says, as to close the canal for the remainder of the season. It is of value to state briefly what this would mean. Taking the figures of last season, namely four and a half million tons, this amount would have to be transferred from vessel to vessel, above and below the lock. Leaving out of account the lost time to the vessels through necessary delay in making connections, etc., the simple portage, out of one vessel across the lock and on to another vessel, would cost, at a very low estimate, seventy cents per ton. This on last season's shipments would mean \$3,169,431, or over \$400,000 per month. Practically a portage on such a scale would be an impossibility, and freight would have

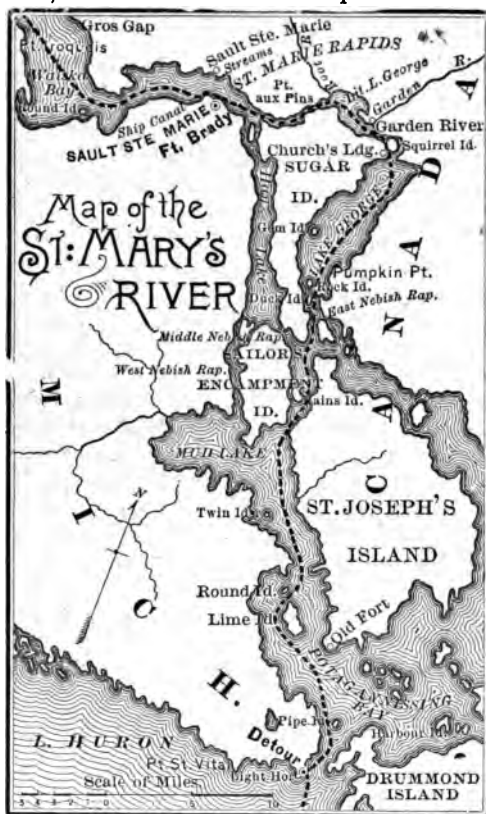
*These dimensions have since been changed to 100 feet and 800 feet respectively.

to seek other routes. The freight from the Northwest could go by lake from Chicago. This at the lowest possible figure would add $2\frac{1}{2}$ cents per 100 lbs. to the freight. For the shipments from and to local Lake Superior points—the copper, iron ore, lumber, coal, etc.—the increase in rate would be much larger. Estimating all the freight at $2\frac{1}{2}$ cents increase in rate, this on the season's shipments would amount to \$2,263,879 or

over \$800,000 per month. These figures are for last year's shipments. For this year they would be still larger. With such facts in mind, it is impossible that any one could quibble over the three appropriations of \$500,000 per year now needed to complete the new lock.

The value of the freight passing through the canal in 1885 is estimated at \$53,000,000. The value of last year's shipments must have been nearly \$70,000,000.

There can hardly be any question at this day as to the national character of this artificial water way. It lies, however, entirely within the state of Michigan, so it may be of interest to state that in 1885 (the figures for 1886 are not yet obtainable), the interest of Michigan in the com-



MATTHEWS, NATHAN & CO., SC., BUFFALO, N. Y.

merce through the canal was but eighteen per cent. Of the enormous amounts of wheat, flour and coal which pass through the canal, not one pound is the product of Michigan.

Another very important improvement which should be considered in this connection is that of the Hay Lake Channel in the Sault Ste. Marie River. This channel, as shown in the little map herewith, would afford a much less circuitous route for the commerce between Lake Superior and Lake Huron than that now in use. It shortens the distance between the two lakes eleven miles out of sixty, but what is of far more importance, when the improvements contemplated shall have been made, it will allow

the passage of vessels drawing twenty feet of water, and will afford a route navigable by night, which is impossible by the present route. Gen. Poe estimates the cost of this improvement as not exceeding \$2,659,115. Three appropriations have been made for the work as follows :

By Act of Congress, approved August 2, 1882.....	\$200,000
By Act of Congress, approved July 5, 1884.....	125,000
By Act of Congress, approved August 5, 1886.....	150,000

The extent of the line is some fifteen miles, so that with sufficient appropriations, simultaneous work could be done over a large area. As yet the appropriations have been too small to allow effective work. Gen. Poe asked for \$500,000 last season and received \$150,000. Even with the large appropriations desired the work cannot be completed for seven years, and as Gen. Poe has pointed out, no part of the improvement will become available until the whole is finished. The value of this work you will readily see, and it is as truly national in character as the lock of the Sault. I hope that the present Congress will show a more realizing sense of its importance.

There are one or two general points connected with the commerce of the lakes which you may find of interest. You perhaps do not know that the daily tonnage through the Sault Canal is larger than that through the great Suez Canal. In July, 1886, the only month for which I have figures for both canals, the Suez Canal shipments were 528,671 official net tons. The tonnage through the Sault Canal for the same period was 561,228 tons, or an excess of 32,557 tons for the month. The shipments through the Sault Canal for the season of 1886 averaged about 19,686 tons per day. The shipments through the Suez Canal for 1884 (I have no later figures) were 5,871,500 tons for 365 days, or an average of 16,087 tons per day. You can easily bring these figures up to date.

I attach diagrams showing in a graphic manner the increase of general tonnage (B) since the canal was opened in 1885, and separate diagrams for the grain (C), flour (D), copper (E), iron ore (F), lumber (G), and coal (H) shipments. These six articles constitute ninety-one per cent. of the total shipments through the canal, and the same prodigious increase is shown in each article. A separate statement (I) shows the number of passengers, which has always been more variable, owing to weather, tourists' whims, and many other causes. The falling off since 1884 is due to the completion of the Canadian Pacific Railway.

Comparing the commerce of the great lakes with our other domestic commerce, in 1884, 38,742 United States vessels, representing 18,045,949 tons, passed through the Detroit River. In addition to this there were 6,021 Canadian vessels, representing 1,221,484 tons, so that the total commerce through the river was 46,939 vessels, or 19,645,271 tons, being five times the combined tonnage of the Mississippi and Ohio rivers for the same period. Yet the appropriations from Congress from 1876 to 1885, were nine million dollars for the great lakes, covering rivers and harbors, harbors of refuge, breakwaters, canals, locks, etc., from Plattsburg on the St. Lawrence to Chicago and Duluth, and including the lock at the Sault and the Lime Kiln improvements in the Detroit River, and twenty-five

millions during the same ten years for the Mississippi alone. I assume that from the records available at Washington you can readily bring these figures to date.

The main part of the information herein furnished is collected from various reports, letters and statements of Gen. O. M. Poe, Lieutenant Colonel of U. S. Engineers at Detroit.

Any information which I can furnish, or can obtain for you, I will be very glad to, if called upon. Yours Respectfully,

FRANCIS ALMY,
Secretary Lake Carriers Association.

STATEMENT OF BUSINESS.

..... of St. Mary's Falls Canal Mich. from the

1887.

Commerce through Sault Ste. Marie Canal in 1887 up to and including SEPTEMBER 30, as compared with the same period in 1886.

	1886 To Sept. 30	1887 To Sept. 30	Increase	Per Cent. of Increase
Steamers	3,563	4,705	1,142	32
Sail Vessels	2,030	2,150	120	6
Unregistered	200	615	415	207
Total Vessels	5,793	7,470	1,677	29
Registered Vessel Tonnage	3,286,266	3,871,373	585,107	18
Freight Tonnage	3,389,037	4,287,709	898,672	27
Passengers	24,645	26,409	1,764	7

	1886.	1887.
Average daily Registered Tonnage	20,638	25,853
" " Freight	20,877	28,530
" " Passage of Vessels,	36 7-10	50

If navigation remains open until November 30, an average daily freight tonnage of 27,372 tons, (its average to August 31, as above was 28,530 tons), for the remainder of the season will correspond to a total of 6,000,000 tons. This may reasonably be expected.

COMMERCE OF SAINT MARY'S FALLS CANAL FOR 1886.

Table No. 1, Comparative Statement of the Amount and Value of the Commerce through St. Mary's Falls Canal for the Calendar years 1885 and 1886.

ITEMS.	QUANTITY.		INCREASE.		DECREASE.		PRICE.		TOTAL VALUATION.	
	1885	1886.	Amount.	Per Cent.	Amount.	Per Cent.	Per Unit.		1885.	1886.
Vessels, number.....	5,390	7,424	2,044	38			\$ 3 50	\$ 3,132,468 50	\$ 3,554,906 50	
Lockages, number.....	2,563	3,583	730	28			5 00	7,201,465 00	8,196,525 00	
Tonnage, registered.....	3,035,337	4,219,397	1,174,460	39			88	15,353,250 12	19,312,720 84	
Tonnage, freight.....	3,250,028	4,157,759	1,371,131	39			50 00	2,576,750 00	5,366,500 00	
Passengers, number.....	36,147	27,038			9,059	25	17 00	158,219 00	152,773 00	
Coal, net tons.....	894,991	1,009,969	115,008	13			1 00	186,355 00	158,677 00	
Flour, barrels.....	1,440,063	1,753,365	313,282	22			200 00	6,385,400 00	7,725,400 00	
Grain, bushels.....	15,697,194	19,706,868	4,009,664	26			3 50	4,393,127 00	1,207,531 00	
Manufactured Iron, net tons.....	60,842	115,208	54,366	89			18 00	2,303,712 00	2,496,384 00	
Salt, barrels.....	136,815	188,677	22,822	16			153 79	564,350 51	308,964 11	
Copper, net tons.....	31,927	38,627	6,700	21			60 00	11,097,780 00	13,545,500 00	
Iron Ore, net tons.....	1,323,132	2,067,809	833,687	69				\$ 53,413,473 13	\$ 69,080,071 95	
Lumber, feet, board measure.....	27,964,000	138,668,000	10,704,000	8						
Silver Ore, net tons.....	3,669	2,009			1,660	45				
Building Stone, net tons.....	8,189	9,449	1,260	15						
Unclassified Freight, net tons.....	184,963	290,726	45,763	25						
Totals.....										

Canal was open to navigation 211 days in 1885.

Canal was open to navigation 294 days in 1886.

1875

1875

1875

Duluth:
Daily News Print.
1887.

Duluth:
Daily News Print.
1887.

